

teeth. Pedicels distributed all over the body, slightly more crowded on the ventral surface. The ends of the pedicels black. Tentacles nineteen or twenty, unequal, completely retracted, and consequently their true position unknown. Perisome rather thick, leathery, flexible, with two kinds of deposits—in the exterior layer, tables with a very much reduced disk and a longer or shorter spire composed of two rods terminating in two or several points; and in the interior layer small, irregular, spinous \times - or H-shaped bodies with one, two, or more holes. The tables are very often highly reduced, needle-like, with one end enlarged and pierced with a hole and with the opposite end pointed, or obtuse and spinous, or even bifurcate. Pedicels strengthened by well-developed terminal plates, and, besides, by some elongated, rod-like or fusiform perforated plates surrounding the terminal plate. Colour in alcohol, brown, lighter round the pedicels; ends of the pedicels black. Length of the largest specimen, 65 mm.

Habitat.—Port Jackson; depth, 6 to 7 fathoms; two specimens.

The tentacles being withdrawn inside the body in both specimens, I cannot distinguish their mutual position or decide whether they are arranged in one or two crowns. However, considering the great similarity of this species with Selenka's *Phyllophorus* (*Urodemas*) *perspicillum* in several important points, I propose to refer it to the genus in question. As far as I can see, no particular tentacles are less developed than the others, but larger and smaller alternate without order. The calcareous ring (Pl. V. fig. 8, a) is composed of ten simple pieces, each bifurcated posteriorly. Though the pieces are rather large, about 16 mm. long., they are flexible, spongy, and not firmly constructed. A strong membrane surrounds the ring exteriorly, communicating to it a cartilaginous appearance. Numerous madreporic canals and Polian vesicles surround the water-vascular ring. The retractors seem to be attached at about the middle of the body, and are united with the longitudinal muscular bands by a mesentery. The ampullæ of the pedicels are visible on the inside of the perisome. The genital tubes are short, thread-like, and slightly branched. The respiratory-trees are well developed. The different kinds of calcareous deposits (Pl. V. fig. 8, b) are figured, consequently no further description of them is necessary. The longest tables measure up to 0.12 mm. or more, and the \times - or H-shaped spinous bodies (Pl. V. fig. 8, c) have a diameter of about 0.05 mm.

With regard to the deposits, the calcareous ring, the numerous madreporic canals and Polian vesicles, the species bears the nearest resemblance to Semper's *Cucumaria maculata*.

When comparing the above description with that of Selenka's *Phyllophorus perspicillum*, one finds an evident similarity in internal and external organisation, and, considering that the forms in question are obtained from the very same locality, there could not be any doubt about referring them to one and the same species, if Selenka's statement as to the shape of the deposits were not so different. Selenka does not mention anything about the tables and \times - or H-shaped bodies, but he figures,